

Appl. No. 10/772,650
Amdt. Dated June 10, 2008
Reply to Office Action of April 11, 2008

REMARKS

Claims 1 – 9 were previously pending in the present application. No claims have been cancelled or amended in this paper.

Claim Rejections Under 35 U.S.C. § 103

Claims 1 and 9 currently stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,842,460 to Olkkonen (hereinafter "Olkkonen") in view of U.S. Patent No. 6,671,259 to He (hereinafter "He"). Applicant respectfully traverses these rejections and requests reconsideration in light of the arguments presented below.

Independent claim 1 recites (Emphasis added):

A method for balancing the load of a wireless local area network, the wireless local area network comprising a plurality of access points forming a service set, the method comprising the steps of:

sending a probe-request frame for association with said service set from a station to said plurality of *access points*;

selecting an access point with the lowest load;

sending a probe-*response* from the access point with the lowest load to the station; and

constructing an *association* between the station and the access point with the lowest load for balancing the load of said plurality of access points.

The Office argues that Olkkonen teaches a method for balancing the load of a wireless local area network, the wireless local area network comprising a plurality of access points forming a service set, the method comprising the step of sending a probe-request frame for association with said service set from a station to said plurality of access points.

The Office concedes that Olkkonen does not teach the steps of:

Appl. No. 10/772,650
Amdt. Dated June 10, 2008
Reply to Office Action of April 11, 2008

selecting an access point with the lowest load;

sending a probe-response frame from the access point with the lowest load to the station; and

constructing an association between the station and the access point with the lowest load for balancing the load of said plurality of access points.

The Office relies on He to remedy the deficiencies of Olkkonen. However, Applicant contends the combination of Olkkonen and He is improper because each is directed to a different technical field.

He is concerned with a server network, wherein clients are connected by cables to a plurality of servers, see for example column 3, lines 19 to 26 describing connection by fiber optic cables and intertwined wires. By doing so, the system provides an IP based routing, see for example column 3, lines 61 to 66. It is generally known to a person skilled in the art that such systems are totally different from the wireless systems described in Olkkonen. In particular, in the system described in He, each of the client systems is permanently connected via the cables to each of the servers. Conversely, in WLAN systems such as those described in Olkkonen, a station is mobile and the connection is only temporarily because stations can move from one place to another. Therefore, in the WLAN standards, association processes have been established. Association as defined in the WLAN standards provides in a standardized way one station to be served exclusively by a basic service set of a particular access point (and no other basic service set of other access points) when the station is within the region of the access point. There is not only no need in He for an association similar to the association of a WLAN system but the system of He actually even teaches away from establishing an exclusive servicing since the system of He wants to have a flexible structure where requests from clients can be served on a request-by-request basis by different servers. This alone would be enough for a person skilled in the art to realize that teachings of He can not be transferred to WLAN systems such as described in Olkkonen. Moreover, in the prior art WLAN systems like Olkkonen, the only technical important parameter for deciding whether to establish a connection is the signal quality,

Appl. No. 10/772,650
Amdt. Dated June 10, 2008
Reply to Office Action of April 11, 2008

see in particular column 4 lines 63 to 67. Signal quality is not at all important in the system of He and therefore He is not capable to provide any motivation why the teaching provided in Olkkonen that decision is based on the signal quality should be replaced by any other teachings.

It becomes clear that the problems the system of He and the WLAN system of Olkkonen have to deal with when establishing connections are totally different and incompatible. In fact, He does not even have a problem of establishing a connection since the connections used are permanent as described above.

Furthermore, it is to be noted that in view of the different technologies, the devices used in the system of He and the devices used in the system of Olkkonen are functionally totally different and not compatible or comparable. For example, the client server of He receives only messages which are routed specifically to the client server by indicating the IP address of the server in the message while in a wireless system no routing can be provided and an access point of a WLAN system receives therefore every message provided that the message has enough signal strength. Furthermore, the access points of WLAN systems are configured to provide association for the station, which is a process that is totally unknown for the system of He. Also the Office's assessment that the person skilled in the art would apply He to Olkkonen in order "to prevent an access point from being overwhelmed by too many probe requests" is respectfully traversed. While it might be advantageous for the system of He to prevent a client server by routing requests of clients only to a dedicated LBS selector making a selection, Olkkonen is a wireless system wherein the basic intention is to have each probe request received by each access point which can be derived from every textbook on WLAN systems since the access points would then not be able to discover new stations appearing in the region of the access point. Therefore He and Olkkonen are not only different technologies but are even contrary to each other. The person skilled in the art would realize that the motivation asserted by the Office in the Office Action to prevent an access point from being overwhelmed by too many probe requests can not be a valid motivation since access points in WLAN systems are expected to receive each probe requests from all stations.

Appl. No. 10/772,650
Amdt. Dated June 10, 2008
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In view of the above, the applicant strenuously disagrees with the Office that He and Olkkonen can be combined. He and Olkkonen are different fields of technology which are totally incompatible and do not allow the application of the teaching of the one field within the other field.

Applicant further points out that the construction provided in the current Office Action is leading to an interpretation with many contradictions. The Office assumes that Olkkonen sends the probe request to each access point, but in He a request is only send always to a same LBS selector. Applicant also points out that the request in He is a request to perform a single specific task for example a domain name resolution (see column 3 lines 55-58) which is not at all compatible with a probe request frame for association of a station, which is a management frame see in particular column 33, lines 39 to 57 of Olkkonen. In particular, as outlined above, in case association is granted based on the probe request by an access point the station will be at least temporally "bound" to the access point which is totally different than the teaching of He providing a task-by-task structure wherein for each task of a client system one of the servers is selected. Applicant can see no indication how a person skilled in the art could possibly resolve these discrepancies in the teachings between He and Olkkonen.

Furthermore, the Office asserts that He would show the step of "sending a probe-response frame from the access point with the lowest load to the station" with reference to column 4, lines 46 - 49. In the referenced text passage, it is described that "if the LB server 17a received the client request from the LBS selector 15 and the lowest load server was server 18a, the LB server would select the server 18a to handle the client request." Thus, all this text passage teaches is that the same request is transmitted from the LBS selector to a LBS server and that the LBS server selects one of the client servers to handle the request. Assuming the construction of the Office to be valid that the client system can be regarded similar to a station of a WLAN system and that the client servers can be regarded similar to access points of a WLAN system - which the applicant however strenuously disagrees with - this passage however neither explicitly nor implicitly describes a sending of any kind of response and in particular this passage neither explicitly or implicitly describes any sending of a response from the server selected to handle the

Appl. No. 10/772,650
Amdt. Dated June 10, 2008
Reply to Office Action of April 11, 2008

request to the client system. Moreover, the Office asserts that He teaches “constructing an association between the station and the access point with the lowest load for balancing the load of said plurality of access points” by referring to column 2, lines 27 – 38. This text passage teaches that the load balancing server is adapted to receive request from the client systems and to forward the requests to the at least one load balancing server. The load-balancing server selects one server out of a subset of the plurality of servers based on a predetermined criteria and the request from the client systems. Assuming the construction of the Office to be valid that the client system can be regarded similar to a station of a WLAN system and that the client servers can be regarded similar to access points of a WLAN system - which the applicant however strenuously disagrees with - the Applicant can not see any teaching of an association since the selection of a server described in this text passage is clearly not an association between the client system and the selected server. In particular the selection of a server is clearly not at all comparable to the association as defined in the WLAN standards.

Overall, it is clear that a combination of Olkkonen and He can not show the limitations of Claim 1 because Olkkonen and He are directed to different technical fields. A person skilled in the art would not combine these references and, even accepting such a combination, *arguendo*, a combination would result in irresolvable discrepancies as He does not disclose the steps of “sending a probe-response frame from the access point with the lowest load to the station” and “constructing an association between the station and the access point with the lowest load for balancing the load of said plurality of access points”.

Dependent Claims 2 to 8 depend from Claim 1. The rejection with regard to these claims should be withdrawn by virtue of the dependency. Moreover, He and Olkkonen do not disclose these further limitations that, when taken together with those of Claim 1, distinguish over the cited art.

Independent Claim 9 recites [Emphasis added]:

A wireless local area network system comprising:

Appl. No. 10/772,650
Amdt. Dated June 10, 2008
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a plurality of access points forming a service set,

at least one station configured to send to *said plurality of access points* a probe-request frame for association with said service set;

wherein the system is configured to select an access point with the lowest load and to send a probe-response from the access point with the lowest load to said station and wherein the system is further configured to construct an *association* between the station and the access point with the lowest load.

Similar to the arguments for Claim 1, the Office argues that He in combination with Olkkonen would teach the limitations of Claim 9. Applicant respectfully traverses this assessment since a combination of Olkkonen and He can not show the limitations of Claim 9 because Olkkonen and He are directed to different technical fields, a person skilled in the art gets no motivation to combine these references, a combination would result in irresolvable discrepancies and He does not disclose the steps of a "system (which) is configured to select an access point with the lowest load and to send a probe-response from the access point with the lowest load to said station and wherein the system is further configured to construct an association between the station and the access point with the lowest load." For details, reference is made to the foregoing.

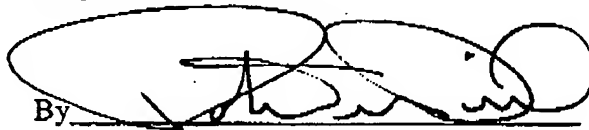
In accordance with the foregoing, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejections.

Appl. No. 10/772,650
Amdt. Dated June 10, 2008
Reply to Office Action of April 11, 2008

CONCLUSION

In accordance with the foregoing remarks, Applicant believes that the pending claims are allowable and the application is in condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should any formalities remain which can be addressed by Examiner's Amendment, the Examiner is requested to contact the below-indicated attorney in order to expedite the prosecution of the present case.

Respectfully submitted,

By 

Robert W. Diehl
PTO Reg. No. 35,118
Seyfarth Shaw LLP
Attorneys for Assignee
131 S. Dearborn Street
Suite 2400
Chicago, Illinois 60603
312-460-5000
312-460-7557 (fax)